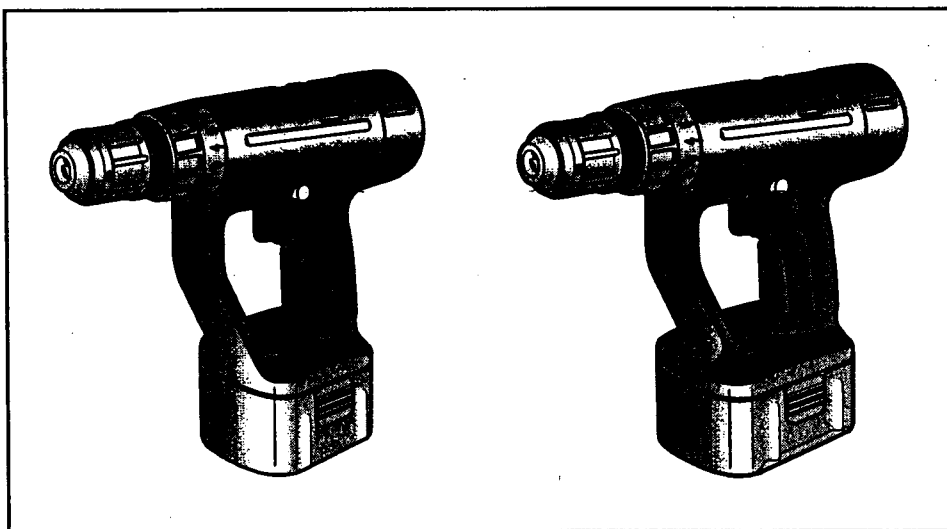


**Operating Instructions
Bedienungsanleitung
Instructions d'utilisation
Istruzioni per l'uso
Gebruiksaanwijzing
Manual de Instrucciones
Brugsvejledning
Driftsföreskrifter
Bruksanvisning
Käyttöohjeet**

Panasonic

**Cordless Hammer Drill & Driver
Akku-Schlagbohrschrauber
Perceuse-visseuse à percussion sans fil
Trapano a percussione senza filo
Snoerloze boorhamer en schroevendraaier
Taladro de martillo e impulsor inalámbrico
Ledningsfri slagbore- og skruemaskine
Sladdlös borrhämmare & skruvdragare
Snorløs bordhammer & drivventileringshull
Langaton porakone & ruuvinväännin**

EY6903/EY6932



Before operating this unit, please read these instructions completely and save this manual for future use.

Vor Inbetriebnahme des Gerätes, die Betriebsanleitung bitte gründlich durchlesen und diese Broschüre zum späteren Nachschlagen sorgfältig aufbewahren.

Lire entièrement les instructions suivantes avant de faire fonctionner l'appareil et conserver ce mode d'emploi à des fins de consultation ultérieures.

Prima di usare questa unità, leggere completamente queste istruzioni e conservare il manuale per uso futuro.

Lees deze gebruiksaanwijzing aandachtig door voor u het apparaat in gebruik neemt en bewaar de gebruiksaanwijzing voor eventuele naslag.

Antes de usar este aparato por primera vez, lee todas las instrucciones de este manual y guarde el manual para poderlo consultar en el futuro.

Gennemlæs denne betjeningsvejledning før brugen og gem den til fremtidig brug.

Läs igenom hela bruksanvisningen innan strölkastaren tas i bruk. Spara bruksanvisningen för senare användning.

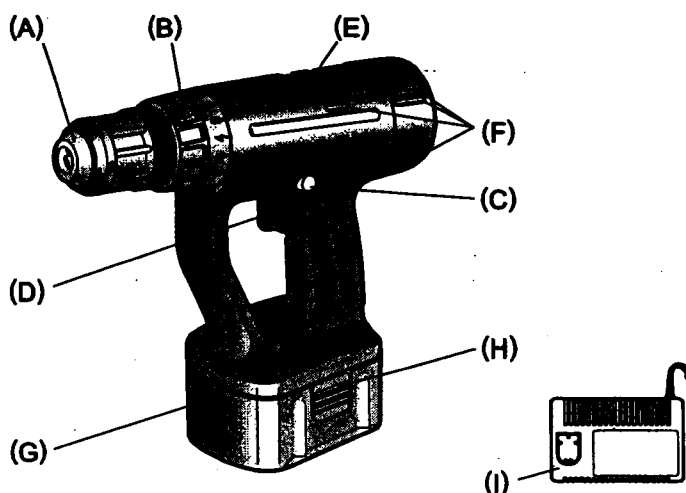
Før erheten tas i bruk, vennligst les disse alle anvisningene og oppbevar deretter bruksanvisningen for senere bruk.

Lue ohjeet huolella ennen laitteen käyttöönottoa ja säilytä nämä käyttöohjeet tallessa tulevaa tarvetta varten.

Index/Hinweise/Index/Indice/Index/Indice/Indeks/Index/Indeks/Hakemisto

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**FUNCTIONAL DESCRIPTION
FUNKTIONSBESCHREIBUNG
DESCRIPTION DES FONCTIONS
DESCRIZIONE DELLE FUNZIONI
FUNCTIEBESCHRIJVING
DESCRIPCIÓN FUNCIONAL
BESKRIVELSE AF FUNKTIONERNE
FUNKTIONSBESKRIVNING
FUNKSJONSBESKRIVELSE
TOIMINTAKUVAUS**



- * EY6903 is referred for illustration.
- * Zur Illustration wird auf EY6903 Bezug genommen.
- * Le modèle EY6903 est montré à titre d'exemple.
- * Ci si riferisce a EY6903 per l'illustrazione.
- * De EY6903 dient ter illustratie.
- * Se remite al EY6903 como ilustración.
- * Der henvises til EY6903 som illustration.
- * Modell EY6903 visas på bilderna.
- * Illustrasjonen viser EY6903.
- * EY6903 viittaa kuvaan.

(A)	Keyless drill chuck Schlüsselloses Bohrfutter Mandrin de perçage sans clé Mandrino senza chiave Sleuteloze boorkop Portabrocas de apriete sin llave Negleies borepatron Snabbchuck Nokkelfri chuck Pikalistukka	(F)	Vent holes Belüftungsöffnungen Trous d'aération Fori di ventilazione Ventilatieopeningen Orificios de ventilación Ventilationshuller Ventilationshål Ventilasjonshuller Ilmanvaihtoaukot
(B)	Clutch handle Kupplungskranz Embrayage Manico della frizione Koppelhendel Empuñadura del embrague Koblingshåndtag Momentinställning Momentveiger Momentinsäddin	(G)	Battery pack (EY9201/EY9231) Akkupack (EY9201/EY9231) Batterie (EY9201/EY9231) Pacco batteria (EY9201/EY9231) Accu (EY9201/EY9231) Blocque de piles (EY9201/EY9231) Batteri (EY9201/EY9231) Batteri (EY9201/EY9231) Batteri-pakke (EY9201/EY9231) Akku (EY9201/EY9231)
(C)	Forward/Reverse lever Vorwärts/Rückwärts-Hebel Lever d'inversion marche avant-marche arrière Leva di avanzamento/inversione Voorwaarts/achterwaarts-hendel Palanca de avance/inversión Greb til forlæns/baglæns retning Räkningsomkopplare Forover/Revers bryter Eteenpäin/taaksepäin vipu	(H)	Battery pack release button Akkupack-Entriegelungsknopf Bouton de libération de batterie Tasto di rilascio blocco batteria Accu-ontgrendeltoets Botón de liberación de la batería recargable Udløserknop til batteripakning Batteriets låsknapper Batteriets utløserknapper Akkupaketin irrotuspainikeet
(D)	Variable speed control trigger Betriebschalter Gâchette de commande de vitesse Grilletto di controllo velocità variabile Startschakelaar variabele snelheid Disparador del control de velocidad variable Kontroludløser for variabel hastighed Steglös varvtalsreglerare Hovedbryter, trinnløs Nopeudensäätökytkin	(I)	Battery charger (EY0230) Ladegerät (EY0230) Chargeur de batterie (EY0230) Caricabatteria (EY0230) Acculader (EY0230) Cargador de batería (EY0230) Batterioplader (EY0230) Laddare (EY0230) Batteri-lader (EY0230) Latauslaite (EY0230)
(E)	Speed selector switch Bereichsschalter Sélecteur de vitesse de rotation Selettore di velocità Snelheidskeuzeschakelaar Conmutador selector de velocidad Hastighedsvælgeromskifter Varvtals omkopplare Gearveiger høy/lav Nopeusalueen valitsin		

Read the Safety Instructions booklet and the following before using.

I. ADDITIONAL SAFETY RULES

- 1) Be aware that this tool is always in an operating condition, since it does not have to be plugged into an electrical outlet.
- 2) When drilling or driving into walls, floors, etc., "live" electrical wires may be encountered. **DO NOT TOUCH THE CHUCK OR ANY FRONT METAL PARTS OF THE TOOL!** Hold the tool only by the plastic handle to prevent electric shock in case you drill or drive into a "live" wire.
- 3) If the bit becomes jammed, immediately turn the main switch off to prevent an overload, which can damage the battery pack or motor.
Use reverse motion to loosen jammed bits.
- 4) Do NOT operate the Forward/Reverse lever when the main switch is on. The battery will discharge rapidly and damage to the unit may occur.
- 5) During charging, the charger may become slightly warm. This is normal. Do NOT charge the battery for a long period.
- 6) Use only a dry, soft cloth to wipe the unit. Do NOT use a damp cloth, thinner, benzene, or other volatile solvents for cleaning.
- 7) When storing or carrying the tool, set the Forward/Reverse lever to the center position (switch lock).
- 8) Do not strain the tool by holding the speed control trigger halfway (speed control mode) so that the motor stops.
- 9) Wear ear protectors when using the tool for extended periods.
- 10) The appliance is not intended for use by young children or infirm persons without supervision.
- 11) Young children should be supervised to ensure that they do not play with the appliance.

II. ASSEMBLY

Attaching or removing bit

Note:

When attaching or removing a bit,

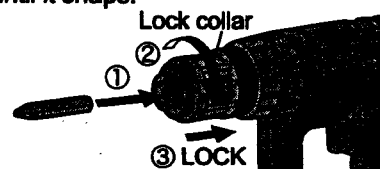
disconnect battery pack from tool or place the switch in the center position (switch lock).

This tool is equipped with a keyless drill chuck.

1. Attachment

Insert the bit and turn the Lock collar clockwise (looking from the front) to tighten firmly.

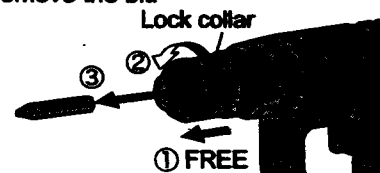
Slide the Lock collar to LOCK side until it snaps.



2. Removal

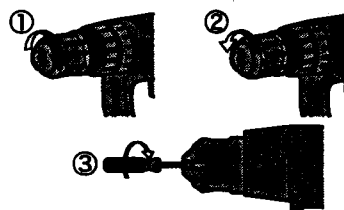
Slide the Lock collar to FREE side.

Turn the Lock collar counterclockwise (looking from the front), then remove the bit.



Note:

If excessive play occurs in the chuck, ① secure the drill in place and tighten the chuck by turning clockwise, ② open the chuck jaws by unscrewing the Lock collar and ③ tighten the screw (left-handed screw) with a screwdriver by turning it counterclockwise (viewed from the front).



Attaching or removing battery pack

1. To connect the battery pack:

Insert the battery pack. It snaps into place to indicate proper connection.

2. To remove the battery pack:
Press the two buttons on the sides of the battery pack. Slide the battery pack out of the tool body.

III. OPERATION

Switch Operation

1. The speed increases with the amount of depression of the trigger. When beginning work, depress the trigger slightly to start the rotation slowly.
2. A feedback electronic controller is used to give a strong torque even in low speed.
3. The brake operates when the trigger is released and the motor stops immediately.

Note:

When the brake operates, a braking sound may be heard. This is normal.

Forward/Reverse lever Operation



(Forward (F), Switch lock, Reverse (R))

CAUTION:

Do not operate Forward/Reverse lever until the chuck comes to a complete stop. Shifting during rotation of the chuck may damage the tool.

Forward Rotation Switch Operation

1. For forward rotation, set the lever to forward.
2. Depress the trigger switch slightly to start the tool slowly.
3. The speed increases with the amount of depression of the trigger for efficient tightening of screws and drilling. The brake operates and the chuck stops immediately when the trigger is released.
4. After use, set the lever to its center position (switch lock).

Reverse Rotation Switch Operation

1. For reverse rotation, set the lever to reverse. Check the direction of rotation before use.
2. Depress the trigger switch slightly to start the tool slowly.
3. After use, set the lever to its center position (switch lock).

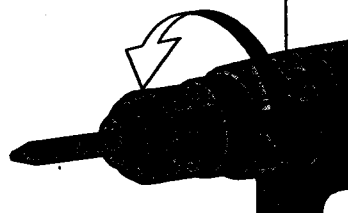
Clutch Torque Setting

Adjust the torque to one of the 5 possible settings or "1/2", "T" position to the job.

CAUTION:

Test the setting before actual operation.

Set the scale at this line.

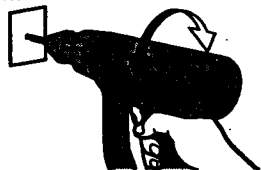


Reference for Adjusting Torque

Scale	Torque	Use
1	Approx. 1.0 Nm (10 kgf-cm or 8.7 in-lbs.)	For driving terminal screws
2	Approx. 1.5 Nm (15 kgf-cm or 13.0 in-lbs.)	For driving machine screws
3	Approx. 2.5 Nm (25 kgf-cm or 21.7 in-lbs.)	For driving screws into soft materials
4	Approx. 3.4 Nm (35 kgf-cm or 30.47 in-lbs.)	For driving screws into hardwood
5	Approx. 4.4 Nm (45 kgf-cm or 39.0 in-lbs.)	
1/2	EY6903: 17.8 Nm (182 kgf-cm, 158 in-lbs.) (Low speed) EY6932: 25.5 Nm (260 kgf-cm, 225 in-lbs.) (Low speed)	For powerful driving and drilling
T	Percussion	For drilling to mortar, brick, etc.

Bit-locking function

1. With the trigger switch not engaged and a screwdriver bit locked in place, the tool can be used as a manual screwdriver (up to 22.6 Nm, 230 kgf-cm, 199 in-lbs). There will be a little play in the chuck, but this is not a malfunction.
2. This feature is handy for tightening screws that require more torque than the maximum torque of the driver (position 2 on the clutch), for confirming the tightness of a screw or to loosen an extremely tight screw.



Speed Selection

Choose a low or high speed to suit the use.

The more the speed control trigger is pulled, the higher the speed becomes.

	No load speed	Torque
LOW	80 - 550/min (rpm)	Strong
HIGH	300 - 2000/min (rpm)	Weak

CAUTION:

- Check the speed selector switch before use.
- Use at low speed when strong force is needed during operation. (Using at high speed while a strong force is applied may cause a motor breakdown.)
- Do not operate the speed selector switch (LOW-HIGH) while pulling on the speed control trigger. This can cause the rechargeable battery to wear quickly or damage the internal mechanism of the motor.
- See appendix for "RECOMMENDED SPEED SELECTION".

For Appropriate use of Battery pack

NI-MH Battery pack EY9201/EY9231

- Charge the Ni-MH battery fully before storage in order to ensure a longer service life.
- The ambient temperature range is between 0°C (32°F) and 40°C (104°F). If the battery pack is used when the battery temperature is below 0°C (32°F), the tool may fail to function properly. In that case, charge the battery until charging is completed for appropriate functioning of the battery.
- When battery pack is not in use, keep it away from other metal objects like: paper clips, coins, keys, nails, screws, or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause sparks, burns or a fire.
- When operating with a Ni-MH battery pack, make sure the place is well-ventilated.

Battery Pack Life

The rechargeable batteries have a limited life. If operation time becomes extremely short after recharging, replace the battery pack with a new one.

Note:

Use under extremely hot or cold conditions will reduce operating capacity per charge.

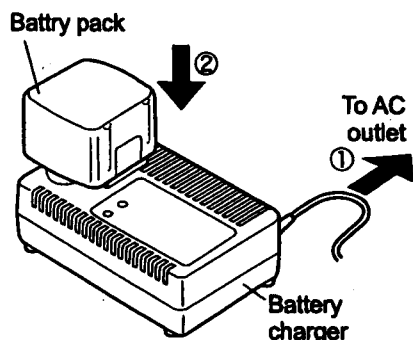
Charging

Note:

When you charge the battery pack for the first time, or after prolonged storage, charge it for about 24 hours to bring the batteries up to full capacity.

EY0230

1. Plug the charger into the AC outlet.
2. Insert the battery pack firmly into the charger.



3. During charging, the charging lamp will be lit.
When charging is completed, an internal electronic switch will automatically be triggered to prevent over-charging.
• Charging will not start if the battery pack is warm (for example, immediately after heavy-duty operation). The orange standby lamp will be lit until the battery cools down. Charging will then begin automatically.
4. When charging is completed, the charging lamp will start flashing rapidly.
5. When in any of the conditions that battery pack is too cool, or the battery pack has not been used for a long time, the charging lamp starts flashing slowly to indicate protective charging. Protective charging takes longer to fully charge the battery

pack, than the standard charging time. (Max. charging time is approx. 90 minutes).

- If a fully charged battery pack is inserted into the charger again, the charging lamp may light up and then flash slowly. After several minutes, the charging lamp may flash quickly to indicate the charging is completed.
6. If the charging lamp does not light immediately after the charger is plugged in, or if after the standard charging time the lamp does not go off, consult an authorized dealer.

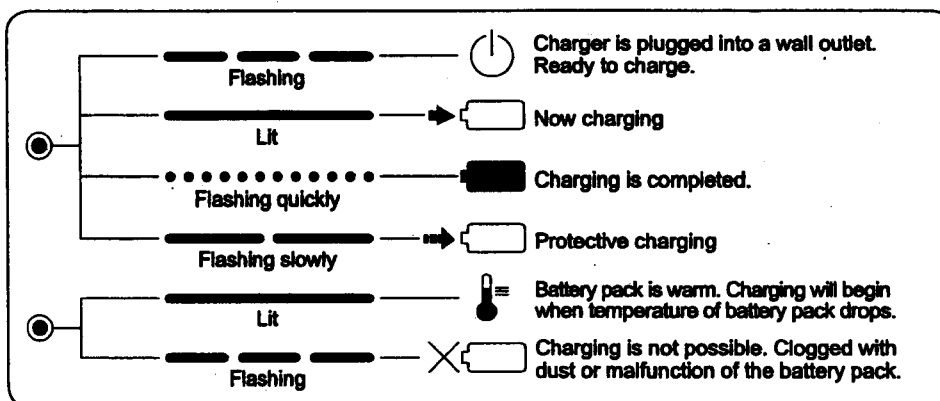
Note:

- When charging a cool battery pack (below 5°C (41°F)) in a warm place, leave the battery pack at the place and wait for more than one hour to warm up the battery to the level of the ambient temperature. (Battery pack may not be fully charged.)
- Cool down the charger when charging more than two battery packs consecutively.
- Do not insert your fingers into contact hole, when holding charger or any other occasions.

CAUTION:

- Do not use power source from an engine generator.
- Do not cover vent holes on the charger and the battery pack.

IV. LAMP INDICATIONS OF THE EY0230



V. ACCESSORIES

Use only bits suitable for size of drill's chuck.

RECOMMENDED SPEED SELECTION

CAUTION:

- USE AT LOW SPEED WHEN STRONG FORCE IS NEEDED DURING OPERATION.
(Using at high speed while a strong force is applied may cause a motor breakdown.)
- Use the following as a guide to select low or high speed for the job.

EY6903

	DRILLING				SCREW TIGHTENING
MATERIAL/ CONDITION	MORTAR / BRICK	WOOD / YELLOW PINE Thickness: 40 mm (1-37/64") or less	METAL Cold-rolled steel plate (SPC) Thickness: 1.6 mm (1/16") or less	METAL HOLE SAW	Wood screws
HIGH	Ø 10 mm (3/8") or less	Not used	Ø 4.5 mm (11/64") or less	Not used	Ø 3.5 mm (9/64") or less
LOW	Ø 10 mm (3/8") or less (Slow operation)	Ø 25 mm (63/64") or less	Ø 13 mm (1/2") or less	Ø 26 mm (1-1/64") or less	Ø 6 mm (15/64") or less

EY6932

	DRILLING				SCREW TIGHTENING
MATERIAL/ CONDITION	MORTAR / BRICK	WOOD / YELLOW PINE Thickness: 40 mm (1-37/64") or less	METAL Cold-rolled steel plate (SPC) Thickness: 1.6 mm (1/16") or less	METAL HOLE SAW	Wood screws
HIGH	Ø 10 mm (3/8") or less	Not used	Ø 6.5 mm (1/4") or less	Not used	Ø 4 mm (5/32") or less
LOW	Ø 13 mm (1/2") or less (Slow operation)	Ø 36 mm (1-27/64") or less	Ø 13 mm (1/2") or less	Ø 34 mm (1-11/32") or less	Ø 6.8 mm (17/64") or less

VI. SPECIFICATIONS

MAIN UNIT

Model			EY6903	EY6932
Capability	Screw driving	Machine screw	M3 ~ M5	M3 ~ M6
		Wood screw	ø 2.1 ~ ø 5.8 mm (5/64" ~ 15/64")	ø 2.1 ~ ø 6.8 mm (5/64" ~ 17/64")
		Masonry screw	ø 4 ~ ø 6 mm (5/32" ~ 15/64")	
	Drilling	Mortal/Brick	ø 3 ~ ø 10 mm (1/8" ~ 3/8")	ø 3 ~ ø 13 mm (1/8" ~ 1/2")
		Wood	ø 3 ~ ø 25 mm (1/8" ~ 63/64")	ø 3 ~ ø 36 mm (1/8" ~ 1-27/64")
		Metal	ø 1.5 ~ ø 13 mm (1/16" ~ 1/2")	
		Metal hole saw	Max. ø 26 mm (1-1/64")	Max. ø 34 mm (1-11/32")
Motor			DC Motor 12 V	DC Motor 15.6 V
No load speed		LOW	80 ~ 550/min (rpm)	
		HIGH	300 ~ 2000/min (rpm)	
Blows rate per minute		LOW	1200 ~ 8250/min (bpm)	
		HIGH	4500 ~ 30000/min (bpm)	
Chuck capacity			ø 1.5 ~ ø 13 mm (1/16" ~ 1/2")	
Maximum torque		LOW	17.8 Nm, (182 kgf-cm or 158 in-lbs)	25.5 Nm, (260 kgf-cm or 225 in-lbs)
		HIGH	4.6 Nm, (47 kgf-cm or 41 in-lbs)	5.9 Nm, (60 kgf-cm or 52 in-lbs)
Blow strength			1.7 kN, (173 kgf, 370 lbs.f)	
Overall length			236 mm (9-5/16")	
Weight (with battery pack)			2.2 kg, (4.9 lbs)	2.4 kg, (5.3 lbs)

BATTERY PACK

Model	EY9201	EY9231
Storage battery	Ni-MH Battery	
Battery voltage	12 V DC (1.2 V × 10 cells)	15.6 V DC (1.2 V × 13 cells)

BATTERY CHARGER

Model	EY0230				
Electrical Rating	See the name plate on the bottom of the charger.				
Weight	0.83 kg, (1.83 lbs)				
Charging time	15.6 V	12 V	9.6 V	7.2 V	Standard charging time
	-	EY9001 EY9006	EY9080 EY9086	EY9065 EY9066	Approx. 20 min.
	-	EY9101	EY9180 EY9182	-	Approx. 25 min.
	EY9136	EY9106 EY9107 EY9108	-	EY9168	Approx. 30 min.
	EY9230	EY9200	-	-	Approx. 45 min.
	EY9231	EY9201	-	-	Approx. 55 min.

Note: This chart may include models that are not available in your area.
Please refer to the catalogue.

ONLY FOR U. K.



VII. ELECTRICAL PLUG INFORMATION

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 3 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amp and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT:

The wires in this mains lead are coloured in accordance with the following code:


Blue: Neutral

Brown: Live

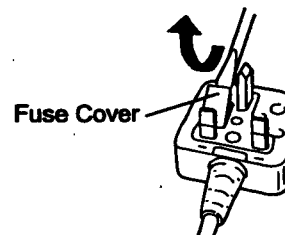
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

How to replace the fuse: Open the fuse compartment with a screwdriver and replace the fuse and fuse cover if it is removable.



This apparatus was produced to BS800.

- * Nach Gebrauch der Verkaufsstelle zurückgeben.
- * Après usage à rapporter au point de vente.
- * Ritornare la pila usata al negozio.

Matsushita Electric Works, Ltd.
Osaka, Japan

No.1 EN. GR. FR. IT. ND. ES. DN. SW. NR. FN
EY971069031 H1501

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